US 20170102775A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2017/0102775 A1**

Keller et al. (43) **Pub. Date: Apr. 13, 2017**

(54) **OPTICAL HAND TRACKING IN VIRTUAL REALITY SYSTEMS**

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(21) Appl. No.: **15/288,453**

(22) Filed: **Oct. 7, 2016**

Related U.S. Application Data

(60) Provisional application No. 62/239,138, filed on Oct. 8, 2015.

Publication Classification

(51) **Int. Cl.**

G06F 3/01	(2006.01)
G06T 19/00	(2006.01)
G06F 3/00	(2006.01)

(52) **U.S. Cl.**

CPC ***G06F 3/017*** (2013.01); ***G06F 3/005*** (2013.01); ***G06T 19/006*** (2013.01)

(57) **ABSTRACT**

A system tracks movement of the VR input device relative to a portion of a user's skin, track movement of the VR input device relative to a physical surface external to the VR input device, or both. The system includes an illumination source integrated with a tracking glove coupled to a virtual reality console, and the illumination source is configured to illuminate a portion of skin on a finger of a user. The system includes an optical sensor integrated with the glove, and the optical sensor is configured to capture a plurality of images of the illuminated portion of skin. The system includes a controller configured to identify differences between one or more of the plurality of images, and to determine estimated position data based in part on the identified differences.